

DEPARTMENT OF HEALTH FOR SCOTLAND

# Model Dairy Byelaws

*Report of the Committee  
appointed by the Secretary of State  
for Scotland*



EDINBURGH  
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1961

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To the Rt. Hon. John S. Maclay  
C.M.G., M.P.  
*Secretary of State for Scotland*

SIR,

We were appointed by you on 12th May, 1958, as a Committee "to prepare new Model Dairy Byelaws under the Milk and Dairies (Scotland) Act, 1914".

Throughout our deliberations we have been fortunate in being able to draw upon the knowledge and experience of the four Assessors to the Committee, Mr. D. S. Barbour and Mr. G. C. Smith of the Department of Agriculture and Fisheries for Scotland, Mr. C. H. Chalmers of the Department of Health for Scotland, and Mr. A. J. F. Tannock of the Office of the Solicitor to the Secretary of State. The advice given by them has been of great value, and we have pleasure in recording our appreciation of their services.

We also desire to record our thanks to the Officers of the Department of Health for Scotland who have acted as Secretary of the Committee. To Mr. R. I. Hulley, who was Secretary until transferred to other duties in July, 1959, and Mr. J. M. Foster who succeeded him, fell the task of preparing the numerous papers and minutes of the Committee and the Sub-Committees through which we operated; and Mr. J. Walker who was appointed Secretary from 1st September, 1960, has given us very great assistance in the drafting of our Report. Of the other Officers of the Department of Health who have given us material assistance we should particularly wish to thank Mr. R. M. Russell.

We have the honour to submit the following Report.

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J. WALKER (*Secretary*)  
23rd March, 1961

# Report of the Committee on MODEL DAIRY BYELAWS

## I. INTRODUCTORY

1. We were appointed by the Secretary of State in May, 1958, "to prepare new Model Dairy Byelaws under the Milk and Dairies (Scotland) Act, 1914". We have reviewed the existing model dairy byelaws, taking into account the changes in milk production and distribution which have taken place since they were framed in 1925, and have drafted new Model Byelaws. Among our members were representatives drawn from the various groups concerned in clean milk production and distribution, viz., dairy farmers and farmworkers, distributors, local authorities, the agricultural colleges and the dairy research institute.

2. We soon came to the conclusion that our remit was too restrictive in view of the limited scope allowed under the 1914 Act for differentiation in byelaws between different types of dairy premises. Under that Act such differentiation is allowed only in respect of four matters—structure, lighting, ventilation and drainage—and then only between dairies constructed before and those constructed after the passing of the Act. It was clear to us that the advances made in the dairy industry since 1925 had introduced complexities of technique and a considerable degree of specialisation in different parts of the industry: consequently in many respects separate sets of byelaws seemed necessary as regards the production, the processing and the distribution of milk. We accordingly sought the guidance of the Secretary of State as to whether our terms of reference might be interpreted so as to permit differentiation of this kind to be made. In his reply, the Secretary of State agreed that we should prepare byelaws appropriate to modern conditions in the dairy industry, even if new legislation to modify the Milk and Dairies (Scotland) Act would be required to give effect to byelaws based on these recommendations. We accordingly proceeded on this basis.

3. We wrote to 56 interested organisations inviting them to submit written evidence; other bodies and individuals were invited by Press notice to send written evidence if they so wished. Subsequently we obtained oral evidence from two organisations in amplification of their written evidence and from two recognised experts in the field of dairy hygiene. The organisations and individuals who gave evidence are listed in Appendix B. A number of dairy farms and processing plants were visited; these are listed in Appendix C. Since, however, members were appointed for their working knowledge of different aspects of dairying, it was not considered necessary to make such visits on an extensive scale.

## II. THE MODEL BYELAWS

4. The Model Byelaws (Appendix A) which we have prepared are grouped under three headings: byelaws relating to (a) all dairies, (b) the production of milk, and (c) the processing of milk. The Model incorporates many drafting changes from the existing byelaws. In particular the drafting has been tightened:

disagreements between dairy farmers and their local authorities over the interpretation of the byelaws have been found to stem from the use in existing byelaws of indefinite phrases such as "to the satisfaction of the local authority", "approved by the local authority" and "required by the local authority", which were employed where more specific requirements appeared difficult to lay down. We understand that such phrases, if included in new byelaws, would be ruled *ultra vires* by the courts and we have accordingly felt it necessary to omit them.

5. The basic structure of the existing byelaws was found to be adequate for their purpose, with the exception, mentioned above, of the need to differentiate between production and processing as well as between existing and new buildings. Substantial changes, however, appeared to us to be necessitated by certain technical advances, particularly the development of suitable chemicals for sterilising milk equipment instead of the traditional method of using steam, and the improvement in methods of large scale refrigeration. These two changes are discussed below.

### *Chemical Sterilisation*

6. Technical investigations into the methods of cleaning and sterilising equipment which has come in contact with milk have shown that certain chemicals can be used effectively to sterilise such equipment. The chemicals which have been found to be most satisfactory are the chlorine compounds.

7. We carefully considered the evidence put to us on the use of chemicals as sterilising agents and concluded that the chlorine compounds which have been approved in recent years by the Ministry of Agriculture, Fisheries and Food for use in England and Wales may be approved for use in Scotland as an alternative to steam or scalding water for sterilising milk equipment. We fully appreciate, however, that as experimental work proceeds other chemicals may be found to be equally effective and we therefore suggest that the byelaws should not themselves specify the chemical sterilising agents to be permitted but should permit the use of such agents as may be approved by the Secretary of State. There is a need for this whole field to be kept under continuous review and there might usefully be a small advisory body to assist in determining on the Secretary of State's behalf which sterilising agents should in future be admitted to the "approved" category.

8. Sodium hypochlorite is at present permitted for the sterilisation of bulk milk tanks and many producers are anxious to extend this method of sterilisation to other equipment which they use. The present partial recognition of chemicals as sterilising agents is unsatisfactory and causes considerable inconvenience to producers. We are consequently of the opinion that, in advance of any steps he may wish to take to give effect to our recommendations as a whole, the Secretary of State should ask local authorities to amend their existing byelaws forthwith to permit chemical sterilisation as an alternative to steam or scalding water. At the same time, clear instructions on how to use chemical sterilisers should be made available to all dairy farmers who are likely to use them.

### *Cooling of milk*

9. The advantages of adequately cooling milk immediately after its production have for long been fully appreciated by dairymen. Indeed although such cooling

can be achieved only by mechanical means, some 2,300 out of 8,339 producers have already installed refrigerated coolers, while 435 producers have installed and 368 have made arrangements to instal bulk milk coolers. We have therefore come to the conclusion that the time is approaching when efficient cooling to at least 50°F should be required by dairy byelaws. We realise however that mechanical cooling on the farm can be operated most satisfactorily only when a supply of mains electricity is available: we also recognise that the sudden introduction of a requirement to cool milk to a low temperature might seriously embarrass some producers who have recently installed new equipment of the non-refrigerated type, or who are awaiting the introduction of a bulk milk collection scheme or who have insufficient financial resources. We have therefore drawn up a model byelaw (No. 90) but consider that its incorporation in any local authority's byelaws should be postponed until it is clear that suitable equipment is available on a sufficiently wide scale. Guidance should be given to local authorities about the supply position by the Secretary of State in due course.

### III. TRANSPORT AND DISTRIBUTION OF MILK

10. The bulk milk coolers (farm milk tanks) mentioned in the previous paragraph have been installed by producers participating in the bulk milk collection schemes introduced in recent years to lighten the labours of producers and distributors alike: we have included in the Model Byelaws provisions to control the installation and use of these tanks. We have not however felt it appropriate to prepare byelaws to control the use and maintenance of the other prerequisite of a bulk collection scheme, the road tanker or the rail tanker, since difficulties in enforcing such byelaws would arise from the extensive field of operation of road and rail tankers, which might include the areas of two or more local authorities. None the less we are satisfied that measures are necessary to ensure that the large volume of milk transported by those vehicles is protected from the risk of contamination and we suggest that the Secretary of State might consider the introduction of such measures by regulation. They should provide for:

- (1) the tankers and ancillary equipment such as hoses being so constructed and maintained that they protect the milk from contamination and can be readily cleaned and sterilised; and
- (2) the rinsing, cleaning and sterilising of tankers after use and the provision of facilities for these purposes at dairy premises receiving milk by tanker.

11. We have similarly proceeded on the assumption that precautions for avoiding contamination of milk or containers while being carried on other types of vehicle should be specified in regulations rather than in byelaws. Although the Food Hygiene (Scotland) Regulations, 1959, already apply in such circumstances, more specific provisions would seem to be desirable.

### IV. HOTEL DAIRIES

12. Some hotels in Scotland, particularly in the north and north-west, keep cows to supply the milk required for their residents as well as for their employees. It seems clear that such hotel dairies come within the definition of "dairy" in

the Milk and Dairies (Scotland) Act, 1914, and consequently require to comply with the dairy byelaws as a whole. In practice, however, local authorities appear often to have regarded most hotel dairies as exempt from registration and hence from the requirement to comply with the byelaws. Hotel dairies where only a small number of cows are kept must, we think, be given special treatment since in such circumstances to comply with the byelaws in their entirety would involve many hoteliers in unreasonable expenditure and might in many instances force them to give up their dairies, thus perhaps removing the only source of supply of fresh milk for residents and employees. We consider that for hotel dairies of this type compliance with a limited number of byelaws, primarily relating to methods and practices, will be a sufficient safeguard.

13. We therefore recommend that the application of byelaws to hotel dairies should be subject to a provision enabling the local authority, with the consent of the Secretary of State, to exempt a hotelier, on receipt of an application, from the requirements of any byelaws; provided that a local authority, again with the consent of the Secretary of State, would have the power to revoke such exemption at their discretion. In this way, compliance with a limited number of byelaws, together with regular inspection and the possibility of withdrawal of exemption from the application of byelaws, will ensure that the hotelier keeps his methods of milk production up to the appropriate standard. We recognise that a provision of the kind described would require new legislation.

## V. UNIFORMITY OF INTERPRETATION

14. The power to make dairy byelaws is possessed by each of the Councils of Counties and Large Burghs, and although for the most part the form of the model issued by the Department of Health is followed, there are sometimes significant differences in the standards permitted in neighbouring areas. An important feature of much of the evidence submitted to us was that greater uniformity than hitherto in enforcing milk legislation was strongly recommended. We urge that all possible steps be taken by the Secretary of State to secure as high a level of uniformity throughout the country as is practicable.

15. This consideration is one of several which leads us to suggest that an early opportunity should be taken to modify the existing provisions for resolving disputes about the interpretation of dairy byelaws. At present a local authority's refusal to register dairy premises or cancellation of a registration because of alleged failure to comply with byelaw standards may be the subject of an appeal to the Sheriff of the area concerned. We believe it would be more appropriate for the byelaws themselves, or the statute under which they are made, to provide for any such dispute being settled on appeal by the Scottish Land Court. This change, together with a refusal on the part of the Secretary of State to confirm byelaws which departed unnecessarily from the model we have prepared, would do much to convince dairy farmers that they were not expected to comply with more onerous requirements than their fellows elsewhere. There would seem to be no reason to expect that the change would lead to any large number of appeals being made to the Land Court.

## VI. EXPLANATORY MATERIAL

16. We realise that for the successful and efficient production of clean milk byelaws are not sufficient in themselves. Farmers, dairymen and all others concerned must understand and apply at every stage the principles of sound hygiene. Since these principles are by no means universally known or understood we recommend that a code of practice for clean milk production be prepared. Such a code should be brief, be written in a clear straightforward style, and be easy to read and understand. Although it would not attempt to give a legal interpretation of the statutory provisions, it would inevitably help its readers to understand the reasons for them and relate the various requirements and prohibitions to the day-to-day practice of milk production. A publication of this kind, which would help the industry to have a better understanding of the byelaws and why they should be complied with, seems to us to be essential when substantial changes such as we recommend are being made to the existing byelaw provisions: we therefore proceeded on the assumption that our draft Model Byelaws would be supplemented in this way.

## VII. CONCLUSION

17. Our major conclusions may briefly be recapitulated as follows:

- (1) Chemical sterilisation using agents approved by the Secretary of State should be allowed without delay as an alternative to the methods of sterilisation permitted by existing byelaws.
- (2) The cooling of milk on farms to not more than 50°F is a realisable objective in the foreseeable future and should become a requirement of revised byelaws after the lapse of a reasonable period of grace.
- (3) In taking the necessary statutory powers to give effect to the making of byelaws on the lines of the Model in Appendix A, power should be taken to make byelaws which suitably differentiate between different classes of dairy premises.
- (4) Disputes arising between local authorities and dairymen over the interpretation of byelaw provisions should be decided by the Scottish Land Court.
- (5) To ensure that the principles underlying the successful and efficient production of clean milk are thoroughly understood an official code of practice should be prepared to amplify the statutory provisions and explain the importance of a high standard of hygiene at all stages.

We believe that these recommendations, and the numerous detailed provisions contained in the Model Byelaws appended to this Report, will command a wide measure of acceptance from the whole dairy industry and local authorities alike.

18. The level of hygiene attained by the Scottish dairy industry is already very high, in some instances outstandingly so: this is in some measure attributable to the foresight of those who framed the Milk and Dairies (Scotland) Act, 1914, and the model byelaws made under it. We hope that it will prove possible to provide at an early date the legislative framework within which our recommendations will be able to make a similar contribution to the further improvement of hygienic standards.



## MODEL DAIRY BYELAWS

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## L. INTERPRETATION

1. (1) In these Byelaws, unless the context otherwise requires, the following expressions shall have the meanings hereby assigned to them:

"Bactericidal agent of approved type and concentration" means a chemical agent approved by the Secretary of State for Scotland both as to type and as to concentration for the purposes of the Byelaws.

"Byre" means the premises in which cows are housed and milked.

"Cold store" means any apartment in which milk may be kept at a temperature not exceeding 50°F.

"Container" includes a receptacle or package of any kind whether open or closed.

"Cow court" means any area within a building or a court in which cows in milk are kept but not milked.

"Dairy premises" includes any byre, milking parlour, milking bail, milk room, dairy scullery, creamery, milk shop, milk bar, or other premises in which milk is produced or processed, or from which it is supplied or distributed for sale or is sold to the public or in which it is kept for the purpose of sale but does not include premises from which milk is supplied only in the properly closed and unopened containers in which it is delivered to the premises or premises in which milk is sold for consumption on the premises only.

"Distributor" means any person or corporate body registered under the .....  
and engaged in the distribution of milk.

"Equipment" includes appliances, containers, crates, plant and utensils used in milking or for the reception, conveyance, storage, processing or distribution of milk.

"Handling" means, in relation to a registered dairyman or any person employed by him, carrying out or assisting to carry out any process or operation in the course of which his person or his clothing is liable to come into contact with milk or equipment.

"Milk" means cows' milk intended for sale or sold for human consumption or intended for manufacture into products for sale for human consumption and includes cream and skimmed milk or separated milk.

"Milk tank" means a refrigerated or insulated container in which milk is stored temporarily at a temperature below 50°F on the producers' premises and includes any attachments to the container necessary for its proper functioning.

"Milking bail" means any moveable structure used to accommodate cows while they are being milked.

"Milking parlour" means any premises into which cows are brought for the purpose of milking.

" New premises " means premises the erection of which is begun or premises brought into use as dairy premises on or after the day when the Byelaws come into operation.

" Pasteurisation " of milk has the same meaning as that contained in paragraph 1 of Part I of the Third Schedule to the Milk (Special Designations) (Scotland) Order, 1951.

" Processing " includes pasteurisation or sterilisation or homogenisation or separation.

" Reconstructed premises " means premises the reconstruction of which is begun on or after the day when the Byelaws come into operation.

" Registered dairy premises " means premises registered under

.....  
" Room " includes apartment.

" Sterilisation " of milk has the same meaning as that contained in paragraphs 1 and 2(1) of Part III of the Third Schedule to the Milk (Special Designations) (Scotland) Order, 1951.

(2) In these Byelaws unless the contrary intention appears words in the singular shall include the plural and words in the plural shall include the singular.

## II. BYELAWS RELATING TO ALL DAIRIES

### A. PERSONS

2. Every person while engaged in the handling of milk shall—

- (a) take such measures as may be reasonably necessary to protect the milk from contamination;
- (b) keep his hands and forearms clean and wash his hands before commencing work in the dairy premises, immediately after using a sanitary convenience and at such other times as may be necessary;
- (c) wear suitable clean overalls to protect the milk from contamination;
- (d) keep covered with a suitable waterproof dressing any area of skin showing signs of infection on any exposed part of his person;
- (e) refrain from spitting or smoking.

### B. PREMISES

3. With the exception of byre walls lime-washed as permitted by Byelaw 7, the inner surface of the walls shall be finished with smooth and impervious material capable of being readily cleaned. The walls shall be brought up vertically so as to form a tight joint with the underside of the roof covering or ceiling.

4. The floors, including milk receiving and loading platforms, shall be of impervious material, be kept clean and in good condition and be so graded as to drain readily to a properly constructed drainage system which shall be readily accessible. All floors in new or reconstructed dairy premises shall be coved at the junction with the walls.

5. Ceilings or interiors of roofs shall be so constructed as to be capable of being readily cleaned.

6. The walls, floors, windows, doors, ceilings or inner surfaces of the roof and all other parts of the structure shall be kept in a proper state of repair and shall be kept clean.

7. Where the walls, ceilings or interiors of the roofs are or any woodwork is painted or varnished, the paint or varnish shall be renewed as often as may be necessary to keep it in good condition. A lime-wash shall not be applied to any part of dairy premises except that part of the walls of an existing byre or court which is more than 4 feet 6 inches above the floor.

8. Adequate provision shall be made for (1) the admission of natural light and (2) a supply of artificial light so that at all times the premises may be suitably and sufficiently lighted.

9. Except in a cold store efficient through ventilation shall at all times be provided by means of suitably placed windows or openings in the walls or roof, or by mechanical means, so as to keep the air at all times fresh and wholesome and to prevent the accumulation of steam.

10. Every cold store shall be provided with adequate lighting and shall be kept in a proper state of repair and in a clean condition. Such a store shall be fitted with an indicating or recording thermometer which shall at all times indicate or record the temperature therein. The operating temperature inside the store shall not exceed 45°F.

11. No part of dairy premises shall be used for domestic purposes, or communicate directly with any room used for domestic purposes.

12. No part of the dairy premises in which milk is produced, processed, stored, or otherwise handled, or in which any equipment is handled, cleaned or stored shall communicate directly with any garage or fuel store or any apartment containing a boiler fired with solid fuel or oil, or with any other premises which may provide a source of contamination of the milk.

13. Sufficient wash-hand basins, conveniently situated, and supplied with clean water, soap or other detergent, and towels or other hygienic drying facilities shall be provided for the use of all persons employed in or about the dairy premises. Such wash-hand basins, soap or other detergent, and towels or other hygienic drying facilities shall be used for securing personal cleanliness only. All wash-hand basins and any fittings and connections thereof shall be kept clean and in efficient working order. Any towel provided in compliance with this Byelaw shall be replaced as soon as it becomes soiled.

14. Sufficient suitable sanitary conveniences shall be available for the use of all persons engaged in or about the dairy premises. The conveniences shall be kept clean and in efficient working order and the apartments in which they are situated shall be suitably lighted, ventilated and conveniently sited in relation to the premises and kept in good repair and shall not communicate directly with any apartment in which milk is produced, processed, handled or stored. At or near every convenience provided there shall be prominently displayed a notice directing attention to Byelaw 2(b).

15. A piped supply of wholesome water sufficient for all washing and cleaning shall be provided within the dairy premises. All water storage tanks within dairy premises from which such a supply is drawn shall be so constructed and maintained as to exclude any source of contamination.

16. Suitable and sufficient facilities shall be provided for washing equipment used for dairy purposes.

17. Liquid waste produced on the dairy premises shall be properly drained into a drainage system so as to obviate contamination of the milk. Refuse, other than liquid refuse and dung, produced on dairy premises shall be deposited in a suitable receptacle constructed of impervious materials and, so far as is reasonably practicable, kept covered. Such a receptacle shall be so placed that no offensive odours, litter or dust therefrom may penetrate the premises and the receptacle shall be emptied as frequently as necessary to maintain it in a sanitary condition.

18. The roads, paths and courtyards within the precincts of the dairy premises shall be so formed and drained as to prevent the lodgment of water or other liquids and shall be kept clean and free from dung, dirt and litter.

19. Every dung-heap shall be so situated as not to be liable to cause contamination of the water supply or of milk produced or handled in the dairy premises.

20. Suitable provision shall be made for the storage of overalls required to be worn under Byelaw 2(c) and for the storage of clothing and footwear kept but not worn on the dairy premises.

## C. EQUIPMENT

### (1) *Construction and maintenance*

21. All equipment which comes or is liable to come into contact with milk shall be so constructed, and shall be of such materials and be kept in such a condition as to—

- (a) enable it to be cleaned,
- (b) prevent so far as is reasonably practicable any matter being absorbed by it, and
- (c) prevent so far as is reasonably practicable any risk of contamination of the milk.

22. All tables, shelves, stands, milking-stools, crates, racks and other furnishings and all mechanical conveyors in dairy premises shall be so constructed as to be capable of being readily cleaned and shall be kept in good repair.

23. All pipes, fittings and couplings used for the conveyance of milk shall be so designed and constructed as to be capable of being readily dismantled and cleaned. Pipe connections and couplings shall be so constructed and maintained as to prevent the leakage of milk therefrom.

24. All pumps, stirrers, agitators and other similar equipment shall be so designed, constructed and placed that they can be readily cleaned and the passage of lubricant from the bearings or drive of such equipment into the milk is prevented. All parts of pumps coming into contact with milk shall be capable of being readily dismantled for cleaning purposes and gland packings and stuffing boxes shall be kept in good condition. Air filters associated with compressed air agitators shall be kept clean.

25. All milk coolers shall be so designed, constructed and placed that every part can be readily cleaned. Cascade and open surface coolers shall be protected from dust and other contamination during the cooling of milk and at such other times as is necessary to prevent dust and other contamination gaining access to the surface of the cooler. Coolers shall be so constructed and main-

tained as to prevent the leakage of water or refrigerant therefrom into the milk being cooled.

26. All equipment used for bottling or cartoning milk and all gaskets, valves and other parts, excluding permanent seals, that come into contact with milk shall be so designed and constructed that they can be readily cleaned.

27. Bottle-capping and carton-sealing equipment shall be so constructed and maintained as to be capable of being readily cleaned.

28. All bottle-washing machines shall be so constructed that each bottle put through the machine is thoroughly rinsed with

- (a) a detergent solution at a temperature of not less than 140°F and of such a concentration as will effect thorough cleaning of the bottle, and
- (b) cold or hot water.

In bottle-washing machines all filters, tanks and jets shall be so constructed and internal surfaces thereof so finished as to be capable of being readily cleaned. Such machines shall be fitted with reliable pressure gauges and thermometers, which shall be kept in good operating condition. The water and detergent jets of bottle-washing machines shall be kept correctly centred.

29. Where brushes are used for bottle-washing they shall be kept clean and in good condition.

30. All water and detergent pumps of can-washers shall be kept in efficient working order and water and detergent jets thereof shall be kept correctly centred.

31. All receiving, balance, storage, heating and holding tanks and bowls of bottle-filling machines shall be provided with covers, lids or hoods so as to protect the milk from dust, dirt and other contamination. Such covers, lids or hoods shall be in position while the tanks or bowls contain milk, and at such other times as is necessary to prevent dust, dirt and other contamination gaining entrance to the tanks or bowls.

32. No galvanised container shall be used to hold milk.

## *(2) Cleaning*

33. All external surfaces of equipment used in connection with the production and processing of milk shall be kept clean and free from milk residues.

34. All equipment which comes into contact with milk shall be kept clean and except for cartons and other non-returnable containers shall as soon after use as is reasonably practicable be thoroughly rinsed with water and washed with a warm solution of a suitable detergent and, before again being used, shall be sterilised by steam or by flowing water at a temperature of not less than 180°F or by scalding with boiling water or by means of a solution containing a bactericidal agent of approved type and concentration. Where sterilisation is carried out by a solution containing such a bactericidal agent, all trace of the bactericidal agent shall be removed from the equipment before milk is again brought into contact with it.

35. Pipelines used for the conveyance of milk shall be dismantled as often as is necessary to keep them clean and shall be cleaned and sterilised as provided in Byelaw 34.

36. Sampling apparatus shall be sterilised before use.

37. Bottles in which milk is sold by retail shall, before being filled, be cleaned on the premises in which they are filled and—

- (a) sterilised by steam; or
- (b) sterilised by an efficient detergent solution at a temperature of not less than 140°F in a mechanical washer; or
- (c) scalded with water at a temperature of not less than 180°F for at least two minutes.

When any detergent has been used for sterilising bottles all traces of the detergent shall be removed from the bottles before they are filled.

#### D. METHODS AND PRACTICES

38. All equipment shall, after cleaning, be kept in a clean place and be protected from dust, dirt and other contamination.

39. Milk which is stored in the dairy premises after cooling shall be kept cool by retaining it in a refrigerator, insulated tank or a cold store, or, where these are not available, in a cool place.

40. Any metal part of any equipment which is rusted or in need of repair or from which the tinning has been removed, and any rubber which has deteriorated shall not be allowed to come into contact with milk. All bottles and containers into which milk is to be put shall be examined before being filled to see that they are thoroughly clean. Bottles with chipped lips shall not be used to contain milk.

41. All milk bottles and cartons immediately after being filled shall be closed by means of mechanical equipment or a hand-operated appliance.

42. All cartons, bottle caps and capping materials, detergents and milk filtering material shall be stored in such a manner as to protect them from contamination.

43. All milk filtering material shall be thoroughly clean before use and shall be changed as often as necessary to ensure that it functions efficiently.

44. Nothing shall be kept or stored in any part of the dairy premises in such a way as to be liable to contaminate milk produced, stored or otherwise handled therein.

45. Before any milk can which has been emptied is delivered to any carrier or other person for conveyance it shall be thoroughly rinsed with clean water and allowed to drain.

46. Every dairyman on receiving milk at his dairy premises shall, without delay and before that milk is put into bottles, cans or cartons, cool it to a temperature not exceeding 50°F unless—

- (a) it is received in the containers in which, without disturbance, it is to be delivered by him to the consumer;
- (b) it is received in sealed containers and, the seals being unbroken, it is to be forwarded to another distributor; or
- (c) it is to be heat-treated or used on the premises for the manufacture of milk products.

47. Except as authorised by statute, no person shall prior to delivery to the customer open any receptacle containing milk, or transfer milk from one receptacle to another except at registered dairy premises. Provided that all

practicable precautions are taken to prevent contamination of the milk by dust or otherwise, this Byelaw

- (a) shall not prohibit a dairyman or his servant or agent
  - (i) from transferring milk from a milk tank on a farm to a milk tanker
  - (ii) from transferring milk from a milk tanker to another milk tanker
  - (iii) from opening a milk tanker or other receptacle containing milk for the purpose of checking the contents thereof or from transferring milk therefrom to another receptacle for the purpose of sampling; and
- (b) shall not apply when milk is sold otherwise than in bottles or cartons
  - (i) on final delivery on a retail sale, or
  - (ii) as, or as part of, a meal or refreshment.

48. Every vending machine and milk dispensing machine from which milk is sold or offered for sale shall be so constructed and of such materials as to be capable of being readily cleaned and shall be kept clean. Every vending machine and milk dispensing machine shall be of a type approved by the Secretary of State for Scotland.

### III. BYELAWS RELATING TO THE PRODUCTION OF MILK

#### A. STRUCTURE OF PREMISES

##### (1) *Byres*

49. (a) In new or reconstructed premises the height of the walls of any byre shall be not less than 7 feet 6 inches from the highest part of the cow-standing to the wallhead except that where there is a ceiling or loft the height of the walls shall be not less than 8 feet 6 inches.

(b) In new or reconstructed premises the width of a single-headed byre excluding feeding passage shall be not less than 15 feet and the width of a double-headed byre excluding feeding passage shall be not less than 25 feet.

50. Fixed trevisses shall be provided in byres. These, and drinking bowls and food troughs where provided, shall be constructed of smooth impervious material and be so constructed and fitted as to minimise lodgment of dirt and dust.

51. The grips in every byre shall be of suitable design and construction and shall permit of free drainage of any liquid. The width of the grips in new or reconstructed premises shall be not less than 27 inches except in those byres where mechanical means of manure disposal are in use.

52. A sufficient supply of water for cleaning the byre and of piped water for cleaning the cows therein shall be readily available.

53. When the cows are lying-in, a suitable bed shall be provided to maintain them in a clean condition.



## *(2) Cow Courts*

54. Every cow court shall be of such an area and of such design as will be conducive to the maintenance of the cows kept therein in a clean condition.

55. The feeding troughs shall be constructed of smooth impervious material and so installed as to minimise the lodgment of dirt and dust.

56. A suitable bed shall be provided each day when the the court is in use to maintain the cows in a clean condition.

## *(3) Milking Bails*

57. Every milking bail shall be suitably designed and constructed and kept in a good state of repair and cleanliness.

58. The bail shall be moved often enough to ensure that the surrounding ground is in such a condition as to minimise the risk of contamination of the milk.

59. A sufficient supply of water shall be available at the milking bail for washing the workers' hands and forearms and for washing the udder and the teats of each cow before milking.

60. Sterilised utensils and equipment intended for use at the milking bail shall be transferred to the bail in such a manner as to prevent them from being contaminated.

## *(4) Milking Parlours*

61. Every milking parlour shall be suitably designed and constructed and kept in a good state of repair and cleanliness.

62. In new or reconstructed premises the height of the parlour shall be not less than 7 feet 6 inches from the floor to the ceiling or to the wallhead. Where the cow stands on a raised platform, the platform shall be not less than 6 feet below the ceiling or the wallhead.

63. The milking stalls shall be fixed and shall be constructed of smooth impervious material and be so constructed as to minimise the lodgment of dirt and dust.

64. A sufficient supply of water for cleaning the milking parlour and of piped water for cleaning the cows therein shall be available in the parlour.

## *(5) Milk Rooms and Dairy Sculleries*

65. Except with the written permission of the local authority dairy premises used for the production of milk shall include either

- (a) a milk room in which to cool, prepare for dispatch and store milk and a dairy scullery in which to clean and sterilise utensils and other equipment, or
- (b) one room which shall comply in all respects with the Byelaws applicable to milk rooms and dairy sculleries.

66. The milk room and the dairy scullery shall be adequate in size for the work to be done therein and their height shall be not less than 7 feet 6 inches from floor to ceiling or to the wallhead.

67. A supply of water or other facilities sufficient for cooling the milk shall

be available in the milk room and a supply of clean water sufficient for the cleaning of utensils and other equipment shall be available in the dairy scullery.

68. The milk room shall contain suitable racks, shelves or tables, constructed of smooth impervious material for the storage of milk cans and other equipment used in connection with the handling of milk.

69. The dairy scullery shall contain at least two suitably constructed troughs or sinks for the rinsing and washing of utensils and other equipment.

## B. FARM MILK TANKS

70. Milk tanks shall be of a type approved by the Secretary of State for Scotland.

71. Milk tanks shall be so designed, constructed and placed that they can be readily cleaned.

72. A milk tank shall not be used for any other purpose than the cooling or storing of milk on the producer's premises.

73. Milk tanks shall be cleaned and sterilised in accordance with the provisions of Byelaw 34.

74. A refrigerating unit not forming an integral part of a milk tank shall be so placed as not to cause hot air or dust to circulate in the milk room.

## C. METHODS AND PRACTICES

### (1) *Cleanliness of Premises*

75. All parts of the structure of dairy premises, and all permanent fittings and fixtures, including troughs, sinks, wash-hand basins and sanitary conveniences, shall be kept clean. In the dairy premises the floor and those parts of the walls liable to soiling by cows or splashing by milk shall be cleaned at least once a day, provided that this Byelaw shall not apply to the floor and parts of the walls of those stalls in the byre which are occupied by cows.

76. No operation liable to raise dust shall be done in a byre or milking parlour immediately before or during milking.

77. All dung and refuse shall be removed from byres at least once a day.

78. No dung or refuse shall be removed to a cow court.

79. No animal other than a bovine animal, no poultry, no bovine animal suffering from any disease that is likely to affect the milk injuriously, no cow hanging or retaining her afterbirth beyond a period of 24 hours and no calf younger than four months that is not housed in a calf pen shall be kept or allowed to be in any byre in use for milk production and no animal or poultry shall be kept or allowed to be in any room in which milk is processed, stored, or otherwise handled: and for the purposes of this Byelaw a calf pen means a pen constructed so as to form a permanent part of the structure of the byre and having the walls and floor finished with smooth impervious material capable of being readily cleaned.

### (2) *Cleanliness of Cows*

80. All cows shall be kept clean but shall not be groomed immediately before milking.

81. The hair on the udder of every cow shall be kept short and the long hairs on the tail shall be clipped so as to keep the brush reasonably short.

82. No cow shall be milked unless and until (1) any dung deposit has been removed from the flanks and tail, (2) the udder and teats are clean, and (3) the foremilk has been drawn. The foremilk shall be drawn into a strip cup and shall not be added to the bulk milk of the herd. Cloths used for cleaning udders and teats shall be washed and wrung out in water containing a bactericidal agent of approved type and concentration immediately before every washing of each cow's udder and teats and shall be sterilised after every milking.

83. No silage or any other feeding-stuff liable to taint the milk shall be fed to cows immediately before or during milking.

### *(3) Cleanliness of Equipment*

84. The vacuum pipe line and sanitary trap of every milking machine shall be washed out as often as may be necessary to keep them clean and not less often than once in every fourteen days; and the rubber vacuum tubes shall be kept clean.

### *(4) Handling of Milk*

85. All reasonable precautions shall be taken to prevent infection or contamination of milk.

86. No milk shall be bottled at dairy premises elsewhere than in the milk room.

87. No milk solids or other deposits shall be allowed to accumulate on any part of any vessel or equipment used in connection with the handling of milk.

88. Milk drawn from any cow

- (a) during three days after calving or such longer period as it remains unfit for human consumption, or
- (b) suffering from any disease liable to infect or contaminate the milk, or
- (c) during, and until 48 hours after the completion of, its treatment with any substance liable to be secreted in the milk, or
- (d) in any place other than a byre, milking parlour or milking bail being part of registered dairy premises

shall not be sold or used for human consumption.

89. No milk shall be drawn into any vessel or be strained, cooled or kept in any byre or milking parlour unless facilities are provided for protection of the milk from dust and other sources of contamination.

90. All milk, except milk that is intended to be used for the feeding of stock or for the manufacture on the farm of a milk product, shall be cooled immediately after production to a temperature not exceeding 50°F. After cooling all reasonable precautions shall be taken to prevent contamination of the milk and any undue rise in its temperature.

91. Any person who uses any place for the deposit of milk to await collection or further conveyance, shall, so far as is practicable, afford the milk protection at that place from the direct rays of the sun or the absorption of heat.

## IV. BYELAWS RELATING TO THE PROCESSING OF MILK

### A. PREMISES

92. The premises on which milk is processed shall be adequate in size and suitably designed and constructed for the type of trade carried on, for the quantity of milk handled, for the satisfactory layout and use of the plant and for maintaining the cleanliness of the premises, plant and equipment.

### B. PLANT AND EQUIPMENT

93. All plant, machinery, thermometers and pressure gauges shall be well illuminated.

94. All plant and equipment shall be so constructed and placed that it can be readily cleaned.

95. The inlet valve or tap to a holding tank or other tank which is gravity fed shall be so designed that the pipe between the inlet valve and the tank shall be as short as possible and have a sufficient fall to enable it to drain readily into the tank. The outlet valve, cock or tap of such a tank shall be so designed and placed that no milk which is insufficiently heated remains in any pipe or space between the valve, cock or tap and the interior of the tank. Such inlet and outlet valves and taps shall be so constructed, placed and maintained that there is no leakage of milk out of or into the tank during processing.

96. Indicating and recording thermometers, and pressure gauges shall be kept in efficient working order and care shall be taken at all times to prevent dust and damp gaining entrance to them. The cables of recording thermometers shall be kept in good condition.

97. All indicating and recording thermometers shall be so placed as to be readily accessible and readable and their accuracy shall be maintained by frequent checking against a thermometer certified as accurate by the National Physical Laboratory. Each record made by a recording thermometer shall be marked with the date on which it was made and shall be preserved for a period of three months and be available for inspection by the local authority on request. The scale of the charts of recording thermometers shall be such that the temperature is accurately and clearly recorded. Recording thermometers shall be kept closed except when charts are being changed. Indicating and recording thermometers shall be so fitted and maintained as to ensure accurate measurement and efficient recording of temperature during the whole time the plant is being operated.

### C. METHODS AND PRACTICES

98. The walls, ceilings, interiors of roofs, shelves, racks, wash-hand basins, furniture and fittings in the dairy premises shall be kept clean at all times, and all floors and steps in the dairy premises shall be cleaned at least once a day.

99. All external and internal surfaces of the plant and equipment used for the reception, processing, storage or distribution of milk shall be kept thoroughly clean and free from milk residues. Such parts of the plant or equipment which come into contact with milk shall on each occasion after use be thoroughly cleaned and sterilised in accordance with Byelaw 34.

## V. REVOCATION CLAUSE

The Milk and Dairy Byelaws made and enacted by.....of the  
.....of.....on.....and confirmed  
by.....on.....are hereby revoked.

## EVIDENCE RECEIVED

Written evidence was received from the following—

- Aberdeen and District Milk Marketing Board.
- Association of British Chemical Manufacturers.
- Association of County Councils in Scotland.
- Ayrshire Cattle Society.
- British Disinfectant Manufacturers' Association.
- British Veterinary Association.
- Convention of Royal Burghs.
- Counties of Cities Association.
- Department of Scientific and Industrial Research.
- Mr. R. J. Forsyth, Advisory Officer, West of Scotland Agricultural College.
- Ministry of Agriculture, Fisheries and Food.
- \*National Farmers' Union of Scotland.
- North of Scotland Milk Marketing Board.
- Mr. Peter M. Pottie, Dairy Farmer, Easter Dalziel Farm, Dalcross, Inverness.
- Rowett Research Institute.
- Royal Highland and Agricultural Society.
- Royal Institute of British Architects.
- Royal Sanitary Association of Scotland.
- Sanitary Inspectors' Association of Scotland.
- Mr. D. M. Savage, Director, Delsanex (Scotland) Ltd.
- Scottish Agricultural Colleges (jointly) (Edinburgh and East of Scotland College of Agriculture; North of Scotland College of Agriculture; West of Scotland Agricultural College).
- Scottish Association of Milk Product Manufacturers and Scottish Milk Trade Federation.
- Scottish Branch, Chartered Land Agents' Society.
- Scottish Branch, Royal Institute of Chartered Surveyors.
- Scottish Council of the British Medical Association and Society of Medical Officers of Health (Scottish Branch).
- Scottish Housewives' Association.
- Scottish Landowners' Federation.
- \*Scottish Milk Marketing Board.
- Scottish Milk Officers' Association.
- Scottish Women's Rural Institutes.
- Shorthorn Society of the United Kingdom of Great Britain and Ireland.

\* also gave oral evidence.

Oral evidence only was received from—

- Mr. W. A. Cuthbert, Head of Bacteriology Department, National Institute for Research in Dairying, Reading.
- Dr. A. L. Provan, Chief Chemist, Milk Marketing Board, Thames Ditton.

## PREMISES VISITED

*Dairy farms, processing plants and Institutes visited by the Committee*

## 1. DAIRY FARMS

Messrs. Basil Baird & Sons, Floors Farm and Windhill Farm, Eaglesham, Renfrewshire.  
 Mr. George Smith, Jnr., High Borland Farm, Eaglesham, Renfrewshire.  
 Mr. John Steven, Lowhill Farm, Eaglesham, Renfrewshire.  
 Mr. Oswald Young, Sandyford Farm, Ayr.  
 Mr. W. Watson, Muirston, Ayrshire.

## 2. PROCESSING PLANTS

Messrs. Logan & Forrest, Davidson's Mains, Edinburgh.  
 The Leith Provident Co-operative Society, Ltd., Duncan Street, Edinburgh.  
 The Edinburgh & Dumfriesshire Dairy Co. Ltd., West Bryson Road, Edinburgh.  
 The Ayrshire Farmers' Dairy Co., Cleland Street, Glasgow.  
 Messrs. W. W. Stevenson, Ltd., Summerfield Street, Glasgow.  
 The Scottish Milk Marketing Board Creamery, Mauchline, Ayrshire.

## 3. INSTITUTES

West of Scotland Agricultural College, Auchincruive, Ayrshire.  
 Hannah Dairy Research Institute, Ayr.